Fact Sheet
NO. 8 JANUARY 1999

Managing Weeds in Pasture

Tips for Small Acreages in Oregon

When to Fight Weeds

Some "weeds" are actually beneficial plants. In hayfields, dandelions extend the time needed to dry hay, but make good forage with almost as much protein as alfalfa. Along fence rows, sweet clovers and grasses may offer habitat for wildlife and beneficial insects. "Weeds" may also reduce erosion while a new forage crop is filling in.

On the other hand, some "weeds" are weeds. Vigorous weeds compete with forage plants for water, nutrients, light, and space. Weeds earn their reputation when they crowd out crops, hurt our pocketbooks, and harm the environment. Take direct action on:

- **New weeds invading your property.**
  Use a quick tug, a shovel, or the appropriate spot-spray to remove a weed before it becomes established on your place. Be sure to remove it before it goes to seed.
- **Perennial weeds.**
  Perennial weeds have a life cycle longer than two years. Once established, they are difficult to remove even with good pasture management.
- **Poisonous and noxious weeds.**
  These plants poison livestock, invade native plant communities, and destroy wildlife habitat. Take immediate action to remove these weeds.
- **More weeds than forage.**
  Control weeds before they make up 30 to 40 percent of the stand. Weeds can point to management problems such as overgrazing, lack of nutrients, or improper soil pH. Try improving your pasture management through rotational grazing, fertilization, and soil pH adjustments. Consider herbicides or renovation only after you have improved your pasture management. Renovation is a good time to control perennial weeds by planting an annual crop to clean up weeds.

USDA Natural Resources Conservation Service

Look Before You Leap on Weeds

Identify weeds. In wise weed control, the most important step is to correctly identify the plant. Many plants are harmless, while others increase fire hazard, increase soil erosion, poison animals, or take over! Knowing the plant species and its traits can save you time, money, and peace of mind. Identify the plant with an identification guide such as:

- *Weeds of the West,* edited by Tom D. Whitson
- *Gilkey's Weeds of the Pacific Northwest,* by La Rea J. Dennis
- *Plants of the Pacific Northwest Coast: Washington, Oregon, British Columbia, and Alaska,* edited by Jim Pojar and Andy MacKinnon

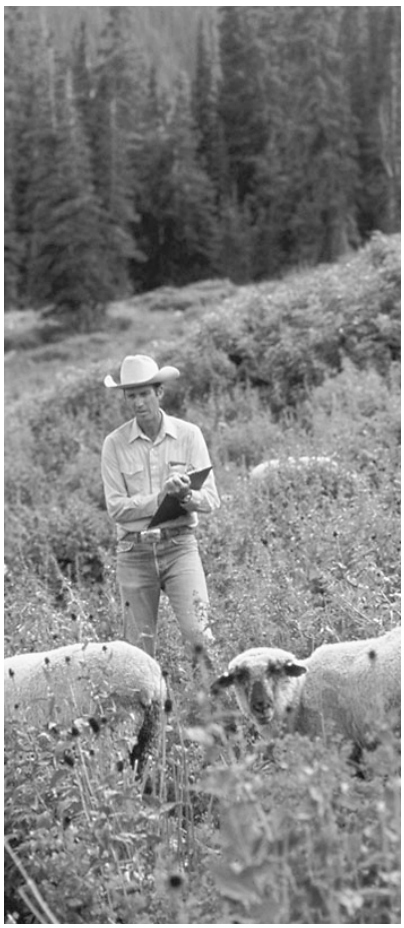
Monitor weeds. Most small acreages can tolerate some loss due to weeds. If the weed doesn't warrant quick action, start a "weed watch" to see if weedy areas expand or shrink with improved pasture management. Consider drawing a weed map of your pasture to keep tabs on the weed population from year to year. If weeds make up more than 30 percent of the pasture, notch up your weed control.

"What is a weed? A plant whose virtues have not been discovered."

- Ralph Waldo Emerson

This fact sheet was produced by the Washington County Soil and Water Conservation District (SWCD) and the Small Acreage Steering Committee. The Governor's Watershed Enhancement Board, the Oregon Association of Conservation Districts, and the USDA Natural Resources Conservation Service funded the project. Media Works of Bozeman, Montana designed the fact sheet.

An Ounce of Weed Prevention



USDA Agricultural Research Service

Stop Seeds at their Source

Why stop weeds before they make seeds? Some startling statistics:

Longevity.

In Denmark, 600-year-old seeds were found in a monastery. Scientists germinated 11 seeds! Although most grass seeds last less than ten years, broadleaf seeds can sprout after decades in the soil.

Population control.

To survive, weeds have turned seed production into a fine art. One pigweed plant can produce 11 million seeds. Many plants "just" produce 100,000 seeds. One noxious weed is "one too many."

Stop weeds from getting a roothold with the following practices:

- **Grow a healthy forage sod.**
  Up to 95 percent of your weed control can come from a thick, vigorous sod that prevents weed establishment and discourages soil erosion. Soil test, fertilize, clip, aerate, and irrigate pastures, if possible. Manage livestock grazing and keep animals off wet pastures.
- **Seed areas around troughs, salt blocks, barnyards, and roadsides.**
  Open soil is an open invitation to weeds. New weeds often show up in these places. Consider seeding these areas annually.
- **Clean equipment.**
  Brush or hose down equipment from weed-infested pastures before entering new pastures. Monitor cleaning areas for new weeds.
- **Control weed seeds spread by floods.**
  Weed seeds can float on water. Install seed screens on outlet pipes and control weeds near irrigation ditches.
- **Quarantine animals new to property or pastures.**
  Animals can deposit weed seeds with their manure and start new infestations. If animals have been grazing a weed-infested pasture, keep livestock in the barnyard for a few days before moving them to a clean pasture. Before spreading manure, compost it to kill weed seeds.
- **Buy weed-free seed.**
  A pound of purchased seed can contain 400 weed seeds. If you ask to see the detailed seed label (and not just the one on the bag), it will list the weeds present by species. This way, you can "select" weed seeds already on your land and avoid planting seeds of something new.
- **Buy weed-free hay.**
  Grow your own hay, inspect grass stands prior to harvest, buy high-quality hay, or buy from a reliable source. By following these practices, you will bring less weed-contaminated hay to your property.
- **Cooperate with neighbors in controlling weeds.**
  A neighboring field of weeds gone to seed can invade your property. Or your weed spray may drift and damage the fruit trees on your neighbor's property. Their problem is your problem and vice versa. Work together to solve weed problems.

A Noxious Weed Alert

Noxious weeds are an "explosion in slow motion." They are exotic plants that flourish in the absence of insects and diseases normally present in their native habitats. These weeds are aggressive and invade native plant communities, crowd out forage, destroy wildlife habitat, and increase erosion. Noxious weeds:

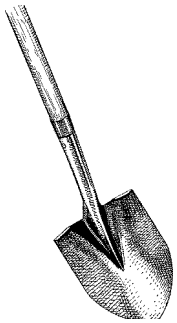
- Comprise 8 to 47 percent of the total plants in most states
- Threaten two-thirds of the endangered species
- Invade western wildlands at the rate of 5,000 acres per day

Once noxious weeds are established, they are difficult to eradicate. Tansy ragwort, leafy spurge, gorse, yellow starthistle, spotted knapweed, scotch broom, Canada thistle, and purple loosestrife are examples of noxious weeds that have caused millions of dollars of economic loss. Contact the Oregon Department of Agriculture (ODA) Noxious Weed Control Program at (503) 986-4621 or your local Oregon State University (OSU) Extension Service office to identify and control noxious weeds in your area.

Wise Weed Control

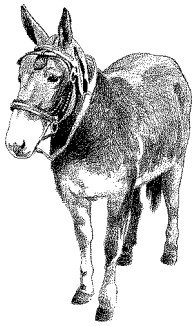
Combine mechanical, biological, and chemical tactics to successfully control weeds:

Mechanical - use your back or a tractor.



- **Scout pastures and pull or hoe weeds.** You can control an infestation before it starts and relieve your stress at the same time! Combine your scouting walks with feeding, moving irrigation pipe, and other chores.
- **Clip to control weeds.** Mow annual weeds before they produce seed heads. Mow perennial weeds twice a year over several years to exhaust root reserves. Mowing will control bull thistle, but can make musk or plumeless thistle harder to control. Disking and harrowing increase rushes or sedges that grow in wet soils. Know your plant and treat accordingly.
- **Till to control annuals and some perennials.** Tillage kills simple perennials that multiply by seed, but will spread creeping perennials that increase by creeping stems. Creeping perennials are the most difficult weeds to control. You may need to use a combination of continuous tillage, repeated mowing, and persistent herbicides to control an infested field.

Biological - work naturally.



- **Plant forages adapted to your site.** Forages adapted to the site conditions have the best chance to grow and compete with weeds. For example, perennial ryegrass will produce high-quality pasture at a site with irrigation, high fertility, and well-drained soils. Tall fescue will grow in less ideal conditions, such as low fertility and dry soils.
- **Use approved insects and diseases to check weeds.** The natural enemies of a particular weed can be used to control weeds. However, natural controls take time to work, do not eradicate the target weed, and have erratic results. Tansy ragwort and St. Johnswort are noxious weeds that have been controlled biologically. For more information, contact the Oregon Department of Agriculture at (503) 986-4621.
- **Graze sheep and goats on weeds and brush.** Sheep and goats will eat leafy spurge and poison ivy, donkeys like thistles, and goats prefer woody brush like blackberries! Confine or tether animals to a small area, but watch out for soil erosion and poisonous plants when "mob" stocking.

Chemical - spray effectively and properly.

- **Read the label.** When pasture management fails to control weeds, use a herbicide selected for the identified weed. To select herbicides, see recommendations in the Pacific Northwest Weed Control Handbook at your local OSU Extension Service office. Read the label when purchasing a herbicide and again before applying it.
- **Calibrate your sprayer for the correct application.** Too little won't work. Too much wastes money and harms the environment.
- **Spray weeds under the right conditions.** Most herbicides need time to dry in order to work, so avoid spraying before a rainstorm. Check the label for temperature requirements because warm conditions can increase spray volatility and injure plants.
- **Avoid drift problems.** Herbicides can drift up to half a mile. Avoid damaging gardens, yards, and sensitive plants like tomatoes, grapes, and maple trees. Reduce drift by using low pressure, large nozzles, drift control agents, or non-volatile formulations such as amine salts rather than esters. Avoid spraying when it is windy.
- **Spray weeds at the proper stage.** A common mistake is to spray perennials too early. Systemic herbicides such as Roundup, 2,4-D, and Banvel should be used on perennials when plant sugars move down into roots. This occurs at bud stage and in the fall.
- **Use the most environmentally friendly herbicide.** Try choosing herbicides with short life spans, low toxicities to wildlife, and low runoff or leaching potentials. Spray in the evening when bees are less active. Dispose of empty containers according to the label. Use anti-backflow valves on faucets and hoses to fill sprayer tanks. An anti-backflow valve will prevent the contents of a sprayer from accidentally entering a well or public water system.

Poisonous Plants

tansy ragwort

Oregon Dept. of Agriculture

yellow starthistle

Oregon Dept. of Agriculture

knapweed

Oregon Dept. of Agriculture

Plants produce poisons so animals will avoid eating them. Most poisonous plants are unpalatable or few in number. For details on the habitat and toxic dose of poisonous plants, see: *Impacts of Common Toxic Weeds on Foraging Livestock or Western Washington Poisonous Plants (for horses).*

Take the following steps to prevent animal poisonings:

- Inspect new pastures before turning animals in, especially in the spring.
- Provide adequate minerals as the lack of salt may produce strange cravings.
- Avoid overgrazing and lack of palatable forage.
- Avoid grazing wetlands and woodlands where many poisonous plants occur.
- Provide supplemental feed during drought when poisonous plants are often the only green plants in the pasture.

If Your Animal Is Poisoned

- Isolate the animal and offer fresh water
- Take samples from the suspected plant to aid in diagnosis
- Call your veterinarian immediately
- Remove the plant from the pasture

You can also call the National Animal Poison Control Center, a nonprofit service of the University of Illinois College of Veterinary Medicine, at 1-800-548-2423. There is a $30 charge for this service.

For Help

- The Oregon State University Extension Service offers publications, workshops, and on-the-phone assistance for weed identification and control. Contact your local office by looking in the blue pages under State Government in the phone book.
- Oregon Department of Agriculture Noxious Weed Control Program provides information on noxious weed identification and control. Call 503- 986-4621 for more information.